



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,027	08/29/2001	Lakshmi Kutty Cheeniyil	70006393-1	9525

7590 04/06/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

THAI, CANG G

ART UNIT	PAPER NUMBER
----------	--------------

3629

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/943,027	Applicant(s) CHEENIYIL ET AL.	
	Examiner Cang G. Thai	Art Unit 3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 29, 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>August 29, 2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 08/29/2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent Application Publication No. 2003/0023472 (LEE ET AL.).

As for claim 1, LEE discloses a method for executing a work flow in a WFMS having at least one process instance executing an original process definition, and migrating the said instance to changed definition, said method comprising the following steps:

a) checking each process instance during the execution of the original process definition whether the process instance meets a migration condition {Column 7, Paragraph [0119], Lines 10-14, wherein this reads over “the workflow program further calls (at block 486) the checkIn method to release the lock on the work item j and the

Art Unit: 3629

outContainer method to generate a new container including any updates to provide to the user at the next node in the workflow”}; and

b) migrating each process instance during the execution the original process definition to a modified process definition if the migration condition is met {Column 7, Paragraph [0119], Lines 16-19, wherein this reads over “if there are further work items for the node I, then control proceeds (at block 488) back to block 452 to retrieve the next work item”}.

As for claim 2, LEE discloses a method according claim 1, wherein checking each process instance further comprises the following steps:

defining a set of worst case migration points (WMP) {Columns 6-7, [Paragraph [0118], Lines 7-9, wherein this reads over “the workflow program then performs a loop at blocks 460 through 490 for each node I in the workflow, as determined from the list of work items by note”}, and

migrating the process instance to the modified process definition, if its execution has not gone beyond anyone said worst case migration points (WMP) {Column 7, Paragraph [0119], Lines 19-21, wherein this reads over “after completing all the work items for node I, control proceeds (all block 490) back to block 460 to process the next node in the work list”}.

As for claim 3, LEE discloses a method according to claim 2, said step of defining a set of worst case migration points (WMP) comprises one of the following actions:

reading a set of worst case migration points (WMP) from an user input {Column 3, Paragraph [0043], Lines 22-25, wherein this reads over “the workflow server 6 then

Art Unit: 3629

executes (at block 112) the action associated with the node and communicates data to the workflow client 12 of the determined user requesting user action"}, or

computing a set of worst case migration points (WMP) based upon the original process definition and the modified process definition {See Fig. 5, Element 116}.

As for claim 4, LEE discloses a method according to claim 3, said step of computing a set of worst case migration points (WMP) comprises the following steps:

defining a set D including all nodes that are changed in the modified process definition with respect to the original process definition {See Fig. 4, Element 460};

determining a set P including all predecessor nodes for all nodes belonging to set D {See Fig. 4, Element 462};

determining a reachability matrix $R=(r_{ij})$ for all nodes belonging to set P, each row and column in the reachability matrix R representing a node in the order listed in P, wherein a node X representing a column is regarded as reachable from a another node representing a row, if there exists a path of arcs forward from X to Y {See Fig. 4, Element 468}; and

determining the set of worst case migration points from the reachability matrix R {See Fig. 4, Element 474}.

As for claim 5, LEE discloses a method according to claim 4, wherein the step of determining the reachability matrix $R=(r_{ij})$ further comprises the following actions:

attributing a value of x to each reachability matrix element r_{ij} if the predecessor node corresponding to said column j is reachable from the node corresponding to said row i {See Fig. 5, Element 482};

attributing a value of x to each reachability matrix element r_{zz} {See Fig. 5, Element 486}; and

attributing a value of y to each reachability matrix element r_{ij} if the predecessor node corresponding to said column is not reachable from the node corresponding to said row i {See Fig. 5, Element 490}.

As for claim 6, LEE discloses a method according to claim 5, wherein the worst case migration points are determined by selecting those predecessor nodes for which the elements r_{ij} from the corresponding column add to a value of x {See Fig. 9, Element 658}.

As for claim 7, LEE discloses a method according to claim 6, wherein a value of 1 is chosen for x and a value of 0 is chosen for y {See Fig. 9, Element 660}.

As for claim 8, LEE discloses a method according to claim 1, wherein said step of checking each process instance during the execution of the original process definition whether it meets a migration condition further comprises of steps for checking whether the node(s) in the original process definition being currently executed is/are also present in the modified process definition {See Fig. 11, Element 718}.

As for claim 9, LEE discloses a method according to claim 8, wherein the step of checking whether a node in the original process definition being currently executed is also present in the modified process definition is repeated upon executing of each node(s) of the original process definition until the migration of said process instance is completed {See Fig. 4, Element 474}.

Art Unit: 3629

As for claim 10, LEE discloses a method for creating a process definition to be executed by a WFMS comprising the following steps:

- a) defining an original process definition to be executed in a work flow system {See Fig. 14, Element 832};
- b) starting execution the process instance as per the original process definition {See Fig. 14, Element 834};
- c) defining a modified process definition {See Fig. 14, Element 836};
- d) checking for each process instance whether a migration condition is met {See Fig. 14, Element 838}; and
- e) replacing the nodes of the original process definition in a running process instance satisfying the migration condition by the corresponding nodes of the modified process definition {See Fig. 14, Element 854}.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

I. U.S. Patent:

- 1) U.S. Patent No. 5,974,389 (CLARK ET AL.) is cited to teach a medical record management system and process with improve workflow features,
- 2) U.S. Patent No. 6,415,284 (D'SOUZA ET AL.) is cited to teach an intelligent forms for improved automated workflow processing,

Art Unit: 3629

- 3) U.S. Patent No. 6,442,663 (SUN ET AL.) is cited to teach a technique for data collection and restoration for homogeneous or heterogeneous process migration, and
- 4) U.S. Patent Application Publication No. 2003/0078825 (COPE) is cited to teach a modular and customizable process and system for capturing field documentation data in a complex project workflow system.

II. Non-Patent Literature:

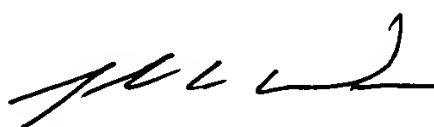
- 1) Mark Vernon, "Alcatel Bell telephone", March/April 1997, Document World, ABI/INFORM Global, Page 52.
- 2) Business/Technology Editors, "PCSI Announces Transamerica Flood Hazard Certification Migration to SQL Server 7.0", November 6, 1998, Business Wire, New York, Page 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cang (James) G. Thai whose telephone number is (703) 305-0553. The examiner can normally be reached on 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (703) 308-2702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CGT
3/30/05



JOHN G. WEISS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600